

AN
ACCIDENCE
OR
The Path-way to
EXPERIENCE.

Necessary for all Young Sea-men, or those
that are desirous to goe to Sea, briefly shewing
the Phrases, Offices, and Words of Command,
Belonging to the Building, Ridging, and Sayling,
a Man of Warre; And how to manage
a Fight at Sea.

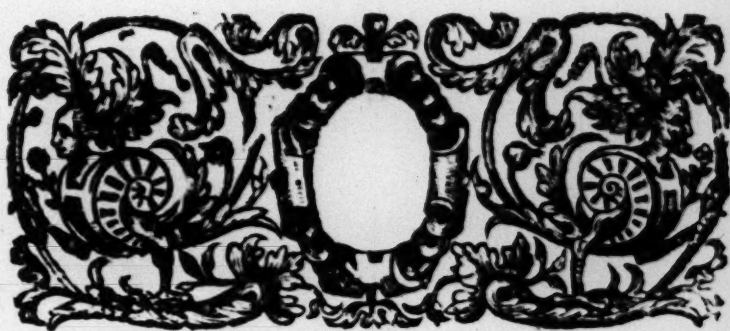
Together with the Charge and Duty of
every Officer, and their Shares:

Also the Names, VVeight, Charge, Shot, and
Powder, of all sorts of great Ordnance.
With the use of the Petty Tally.

Written by Captaine IOHN SMITH some-
times Governour of *Virginia*, and Admirall
of NEW ENGLAND.

LONDON:

Printed for Jonas Man, and Benjamin Fisher,
and are to be sold at the signe of the *Talbot*,
in *Aldersgate streete.* 1626.



TO ALL THE
RIGHT HONORABLE

And most Generous Lords in *England*,
and Others: Especially of his Majesties
Privy Councell, and Councell of Warre.



RIGHT HONORABLE:

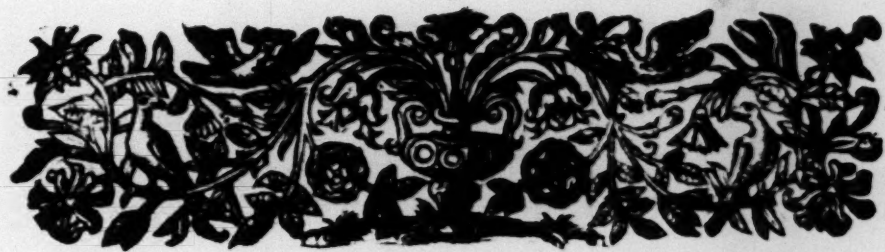
In regard of the Present occasion, for the Arte of Navigation, and many young Gentlemen and Valiant spirits of all sorts, do desire to trye their Fortunes at sea: I haue beene perswaded to Print this discourse, being a subject I never see writ before. Not as an instructi-

The Epistle Dedicatory.

on to Marriners nor Sailors, whom
I intreate rather amend it, then con-
demne it, confessing it might be a
taske for a most excellent Sea-man;
But as an intraduction for such as
wants experience, and are desirous
to learne what belongs to a Sea-
man; for the advancing of that in-
comparable faculty, seeing you are
in place, both of power and Autho-
ritie; I most humbly present it to
Your Honors Considerations: No
more but sacrificing all my best abil-
lities to the exquisite Iudgement, of
your renowned Vertues, I ever rest

Your Lordships ever most humbly devoted,

JOHN SMITH.



TO THE READER;
AND
ALL GENEROUS AND
Noble Adventurers by Sea;
And Well-Wishers to
NAVIGATION.

ESPECIALLY THE MASTERS,
Wardens, and Assistance of the
TRINITY-HOUSE.

Worthy Readers :



HOW ever your perfecti-
ons may censure my im-
perfections, I know not,
my greatest error in this
is but a desire to do good,
which disease hath ever
haunted me since my
child-hood, and all the miseries and ingrati-
tudes I have indured, cannot yet diuert me from
that resolution : As both Europe, Asia, Affri-

ca,

To the Reader.

ca, and America can partly witnesse, if all their extremities hath taught me any thing, I haue not kept it for my owne particuler, I know well I am blamed for not concealing that, that time and occasion hath taught mee to reueale, as at large you may read in the life of Sigismundus Bathor Prince of Transilvania, writ by his Secretary Francilco Fernezla. New Englands Trialls With the Generall History of Virginia, New England, and the Summer Isles, that the most of those faire plantations did spring from the fruites of my aduenturers and discoueries is euident, although their retournes as yet doth not answere the worlds expectation, nor my desire; yet how they haue proceeded euery yeare since their first originall, to this present, by the Mapst therein, you may plainly see the Discriptions of the Countries by the Story, what they are, what good they might be to this Kingdome, how they haue bin vsed and abused, how the defects might be amended, the Planters made happy, God and the King well pleased and serued, and all the Honorable and worthy Aduenturers contented: Whatsoeuer malice or ignorance can feigne to the contrary, for

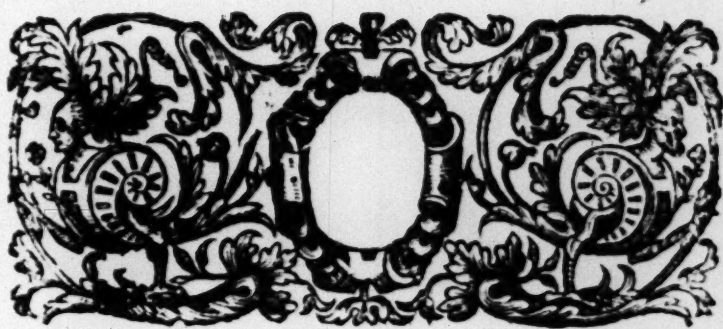
To the Reader

for this small Pamphlet, if I find you kindly
and friendly accept it. I mean no
long, more largely to explain
the particulars: So I
rest,

To Christ and my

Country a true Souldier,
and faithfull Servant,

John Smith.



An Accidence for Young Sea-men:

OR,

Their Path-way to Experience.



HE *Captaines charge* The Captains charge. is to commaund all,
and tell the Maister
to what Port he will
go, or to what height,
In a fight he is to giue
direction for the ma-
naging thereof, and the Maister is to
see to the cunning the Ship, and trim-
ming

ming the sailes.

The Maister
and his Mates.

The *Maister* and his *Mate* is to direct the course, commaund all the Saylor, for steering, trimming and sayling the Ship, his Mates are onely his Seconds, allowed sometimes for the two Midships men, that ought to take charge of the first prize.

The Pilot.

The *Pilot* when they make land, doth take the charge of the Ship till he bring her to Harbour.

The Cape-
merchant and
Purser.

The *Cape merchant* and *Purser* hath the charge of all the Caragafoune or Merchandize, and the *Purser* doth keepe an Account of all that is receiued and deliuered, but a Man of Warre hath onely a *Purser*.

The Gunner
with his Mate,
and quarter
Gunner.

The *Maister Gunner* hath the charge of the Ordinances, Shot, Powder, Match, Ladles, Spunges, Cartrages, Armes and Fire-workes, and the rest e- uery one to receiue his charge from him according to directions, and to giue an account of his store.

The

For yong Sea-men.

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The *Carpenter* and his *Mate* is to haue the Nayles, Clinches, roue and clinch-nailes, spikes, plates, rudder-irons, called pintels and gudgions, pumpe-nailes, skupper-nailes and leather, sawes, files, hatchets and such like, and euer ready for calking, breaming, stopping leaks, fishing or splicing the Masts or Yards, as occasion requirereth, and to giue an account of his store.

The Carpen-
ter and his
Mate.

The *Boteswaine* is to haue the charge of all the Cordage, tackling, failes, fids, and marling spikes, needles, twine, and saile-cloth, and rigging the shippe, his Mate the command of the long boate, for the setting forth of Anchors, waying and fetching home an Anchor, warping, towing, and moreing, and to giue an account of his store.

The Bote-
swaine and
his Mate.

The *Chirurgion* is exempted from all duty but to attend the sicke, and cure the wounded, and good care Would be

The Chyrur-
gion and his
Mate.

had, he haue a certificate from the *Barber-surgions* Hall of his sufficiency, and also that his Chest bee well furnished both for *Physicke* and *Chyrurgery*, and so neere as may bee proper for that clime you goe for, which neglect hath beene the losse of many a mans life.

The Marshall.

The *Marshall* is to punish offenders, and to see *Iustice* executed according to directions, as ducking at Yards arme, hawling vnder the Keele, bound to the Capsterne, or maine Mast with a basket of shot about his necke, setting in the bilbowes, and to pay the Cobty or the Morryoune. But the Boyes, the *Boteswaine* is to see euery Munday at the chist to say their Compasse, which done, they are to haue a quarter can, and a bisket of bread.

The Corporal.

The *Corporall* is to see the setting and releeuing the watch, and see all the souldiers and saylors keepe their Armes cleane, neate and yare, and teach them their vse.

The

For yong Sea-men. 5

The *Steward* is to deliuer out the victuall, according to the Captaines directions, and messe them 4, 5, or 6, as there is occasion.

The Steward
and his Mate.

The *quarter Maisters* hath the charge of the hold for stowage, rommageing, and trimming the shippe, and of their squadrons for their Watch, a Sayne, a Fisgigg, a Harping iron, Fish-hookes, for Porgos, Bonetos, or Dorados, &c. and rayling lines for Mackerell.

The quarter
Maisters.

The *Cowper* is to looke to the caske, hoops and twigges, to staue or repaire the buckets, Baricoes, Cans, steepetubs, runlets, hogsheds, pipes, buts, &c. for wine, beere, syder, beuerage, fresh water, or any liquor.

The Cowper
and his Mate.

The *Coxswaine* is to haue a choyce to attend the Skiffe to go to and againe as occasion commandeth.

The Cox-
swaine and his
Mate.

The *Cooke* is to dresse and deliuer out the Victuall, he hath his store of quarter cans, small cannes, platters, spoones, lanthornes, &c. and is to giue

The Cooke
and his Mate.

his account of the remainder.

The Swabber.

The *Swabber* is to wash and keepe cleane the ship and maps.

The Lyeer.

The *Lyeer* is to holde his place but for a weeke, and hee that is first taken with a lye, euery Monday is so proclaimed at the maine Mast by a generall cry, *A lyeer, a lyeer, a lyeer*, he is vnder the *Swabber*, and onely to keepe cleane the beake-head and chaines.

The Saylers.

The *Saylers* are the anti ent men for hoyfing the sailes, getting the tackes aboard, hawling the Bow-lines, and steering the ship.

The Yonkers.

The *Yonkers* are the yong men called *Fore-mast men*, to take in the Top-sayles, or Top and yeard, Furlie, and Sling the maine Saile, Boufing or Tryfing, and take their turne at Helme.

The Lieutene.
nant.

The *Lieutenant* is to associate the Captaine, and in his absense to execute his place, he is to see the Marshall and Corporall doe their duties, and assist them in instructing the Souldiers, and
in

For yong Sea-men. 7

in a fight the Forecastle is his place, to make good, as the Captaine doth the halfe decke, and the quarter Maisters, and mid-ships men, but in the *States* men of Warre he is allowed as necessary as a Lieutenent on shore.

When you set sayle and put to sea, How to deuide the Company. the Captaine is to call vp the company, and the one halfe to goe to the Starreboord, the other to the Larboord, as they are chosen, the Maister chusing first one, then his mate another, and so forward till they bee deuided in two parts, then each man is to chuse his Mate, Consort, or Comrado, then deuide them into squadrons according to your numbers and burthen of your ship: but care would be had, that there be not two *Comorados* vpon one watch, because they may haue the more roome in their Cabons to rest.

To giue a true *Arithmetical* and *Geometrical* proportion for the building of ships, were they all built after one mould,

mould, as also of their Yeards, Masts, Cables, Cordage and Sayles, were all the stuffe of like goodnesse, a methodicall rule might bee Projected, but it would bee too curious for this Discourse, and as much too troublesome either for the Reader or Author, but the principall names of the timbers about the building of a ship, according to his vnderstanding followeth, and how being framed they are fixed.

The Principall
names of the
timbers about
the building
a ship.

First lay the Keele, the Stemme, and Starne, in a dry docke, or vppon the stockes, and binde them with good knees, then lay all the Flore timbers, and cut your Limber holes about the keele, to bring the water to the well for the pumpe. Next your Nauell timbers, and bind them all with fixe foote Skarfe at the least, the Garbell strake is the outside plancke next the keele, be sure you haue a good sufficient Kelson, and then plancke your outside and inside vp, with your Top timbers, but the lengths,

For yong Sea-men? 9

lengthes, breadthes, depthes, rakes and burdens are so variable and different, that nothing but experience can possibly teach it.

A Shippe of 400, Tunnes requires a planke of foure inches, 300. Tunnes three inch, small Ships two inch, but none lesse. For clamps, middle bands and sleepers, they be all of 6. inch planke for binding within. The rest for the sparring vp of the workes of square 3. inch planke; Lay the beames of the Orlope, if the be 400. Tunnes at ten foote deepe in howle, and all the beames to be bound with two knees at each ende, and a stardard knee at euery beames end vpon the Orlope, all the Orlope to be layd with square three inch plancke, and all the planckes to be treenailed to the beames.

Notes for a
Covenant be-
twene the
Carpenter
and the Ow-
ner.

Sixe foote would bee betweene the beames of the Decke and Orlope, and ten ports on each side vpon the lower Orlope, all the binding betweene them

C should

should be with three inch, or two inch plancke, and the vpper Decke should be layd with so many beames as are fitting with knees to bind them; laying that Decke with spruce deale of 30. foot long, the sap cut off, and two inches thicke, for it is better then any other.

Then for the *Captaines* Cabben or great Cabben, the stearage, the halfe Decke, the round house, the Fore-castle and to binde an ende with a Capsterne and all things fitting for the Sea, the *Smiths* worke, the caruing, ioyning, and painting excepted, are the principall things I remember to be obserued, for a *Charter-party* betwixt the *Merchant*, the *Maister* and the *Owner*, you haue Presidents of all sorts in most *Scriueners* shops.

Generall sea
termes belong-
ing to ships.

A dry Docke, the stockes, the keele, the steme, the sterne, the starne-post, the flowre, the sleepers, rising timbers, garble strake, her rake, the fore reach, planks, bindings, knees, boults, truni-
ons,

ons, brasers, riders, the Orlope, the ports, the bend, the bowe, the hawse, the hawses, the decke, the partners, a flush decke, fore and aft, the ram heads, the Knights, a halfe decke, a quarter decke, the bulke, the bulkes head, the skuttle, the hatches, the hatches way, the holes in the commings, pitch, tarre, rosen, økum, calking. In the stearage roome, the whip, the bittakell, the tra-uas boord, the Compasse, the Fly, the needle, the lanthorne, the socket. About the Gun-roome, the Tiller, the rudder, the pintels, the gudgions, the bread-roome, the ships runne. The powder-roome, the Stewards roome, the cooke roome, the great cabbon, the gallery, a cabben, a hanging cabben, a Hamacke, the lockers, the round-house, the counter, the wayst, the wayst-boords, the gunwayle, stations for the nettings, a chaine through the stations, or brest-ropes.

The Pumpe, the pumpes well, the

What belongs
to the Pumpe.

pumpes brake, the pumpes can, the pumpes chaine, the spindle, the boxe, the clap, the pumpe is choaked, the pumpe suckes, the ship is stanche.

What belongs
to the fore ca-
stle.

The forecastle, or prow, the beake-head, the bits, the fish-hooke, a loufe hooke, and the blot at the *Dauids* ende, the Cat, Cats head and Cats holes, the ships draught.

The Masts,
Caps and
Yards.

The boule spret, the pillow, the stur-rop, the spret sayle, the spret sayle yeard, the spret sayle top mast, the spret sayle top sayle yard, the foremast, the fore yard, the fore top, the fore top mast, the fore top sayle yard, the fore top gallant mast, the fore top gallant sayle yeard, coates and wouldings for all masts and yeards, Grummets and staples for all yeards. The trussell trees or crosse trees, the maine mast, the step in the kelson, where it puts its heele, as doth also the fore mast, the maine yard, the maine top, the maine top mast, the maine top sayle yeard, the top gallant mast,

maſt, the maine top gallant ſayle yeard,
the truck, or ſlagge ſtaffe. The miſen,
the miſen yeard, the miſen top maſt,
the miſen top ſayle yeard, in great ſhips
they haue two miſens, the latter is cal-
led the *boneauentuer* miſen, then the
poope, Lanthorne and ſlagge ſtaffe:
when a maſt is borne by the boord,
they make a lury-maſt, which is made
with yards, routtrees, or what they can,
ſplited or fiſhed together.

The Capſterne, the pawle, the
whelps, the capſterne bars, a leare cap-
ſterne is onely in great ſhips to hoyle
their ſayles, the canhookes, ſlings and
parbunkels, ports and ringbolts and
hooks, the ſkupper, the ſkupper holes,
the chaines, the ſteepe tubs, an entring
ladder or cleats, a boy, a can boy, a ſhip
cranke ſided, Iron ſicke, ſpewes her
okum, a leake ſhip, the ſheathing, fur-
ring, carrying, waſhing and breaming,
lanching, caruing, guilding and pain-
ting a ſhip, ballaſt, kintlage, canting
C 3 coynes,

The capſterne
and other ge-
nerall phraſes.

coynes, standing coynes, rouse trees, a grating, netting or false decke for your close fights.

The ropes
names in a
ship.

The entring rope, the boate rope, the bucket rope, the boy rope, guest rope, the cat rope, the port ropes, the keele rope, the rudder rope, the top ropes, the bolt ropes, the brest ropes are now out of vse, the water line is.

Concerning
the tackling
and rigging
a ship.

The tacklings are the fore stay, the maine stay. The tackles, the mison stay, the collers, the maine shrouds and chaines, the maine top shroudes, the fore shroud, the fore top shroud, the swifters, the mison shroudes, the mison top shroudes, and their ratlings, and the pannels to all masts, the maine hallyards, the maine top sayle hallyards, the top gallant saile hallyards, the fore hallyards, the fore top sayle hallyard, the mison hallyard, and the spret sayle hallyard, the horse, the maine sheats, the maine top sayle sheats, the maine braces, the maine top sayle braces,

braces, the maine bowling and bridles, the maine top sayle bowlin, the bunt lines, the trusses, the lifts, the carring, the cat harpings; a leare, leatch lines; the Robins, garnit, Clow garnits, ryes, martlits, the most of all these are also belonging to the fore-mast, misen and bowlespret, and hath the same denomination after their masts, only the bowlespret hath no bowlines, and the misen sheats, are called the starne sheats, they haue all of them pullies, blockes, shiuers and dead mens eyes, Lanycards, caskets and crowes teete. A snap blocke is seldom vsed but in heauing of goods and ordinances.

There is also diuerse other small cordage, as head lines, the knaulings gassits or furling lines, matlines, rop yearne, Caburne, Sinnet, paunches and such like.

The Cables, hawfers or streame cables, are most vsed in the water by the Anchors, when they are too short, they

they shoote one into another when they are galled or breake, they splice them, when that way vnseruiceable, they serue for Iunkes, fendors and braded plackets for breasts of defence, and then as the rest of the ouerworne tackling: for rope yarne, caburne, finnit an okum, sheeps feet is a stay in setting atop mast, and a guie in staying the tackles when they are charged with goods.

Termes for
the Anchors.

The Anchor hath a stocke, a ring, a shanke, a flouke, the greatest in euery ship is called the sheat Anchor, the rest Anchors, a streame Anchor, graplings or kedgers, bend your cables to your Anchors.

The names of
the sayles.

The maine sayle, the fore sayle called sometimes the fore course, the maine course or a paire of courses, each of them hath a bonnet and a drabler, the maine top sayle, the top gallant sayle, and in a faire gaile your studding sayles, then your mison, your misen
top

top sayle, your spret sayle, and spret sayle top sayle, a drift sayle, a crofiack, a netting sayle, twyne, a munke seame, a round seame, a suite of sayles, a shift of sayles, top Armour, wayst clothes, pendants and colours.

A channell, a bay, a rode, a sound, an The tearmes for the harbor offen, a coue, a crike, a riuer, cleere ground, very fast ground, or good anchoring, foule ground, osie ground, sandy ground, clay ground, a headland; a furland, a ketch; a land marke.

A calme, a brese, a fresh gaile, a plea- For the wind sant gayle, a stiffe gayle, it ouerblowes, a gult, a storme, a spoute, a loume gaile, an eddy wind, a flake of wind, a Tur- nado, a mouthfoune, a Herycano.

A calme sea, becalmed, a rough sea, Tearmes for the sea. an ouergrowne sea, the rut of the sea, roaring of the sea, it flowes, quarter floud, high water, or a still water, a full sea, a spring tide, ebbe, a quarter ebbe, halfe ebbe, three quarters ebbe, a lowe water, a dead low water, a nepe tide, a

D shoule,

shoule, a ledge of rockes, a breach, a shallow water, deepe water, soundings, tadome by the marke, 3 o d. and a shaftment left. 4 o d. disimboage, a gulph, the froth of the sea.

Termes for
steering.

Starbord is the right hand, Larbord is the left, starboord the helme, right your helme a loufe, keepe your loufe, come no neere, keepe full, stidy, so you goe well, port, warre, no more; beare vp the helme, goe roimye, beyare at the helme, a fresh man at the helme.

Termes of
warre.

A sayle, how stands she, to wind ward or leyward, set him by the Compasse, he stands right a head; or on the weather bow, or ley bow, out with all your sayles, a stydy man to the helme, sit close to keep her stydie. Giue chase or fetch him vp, he holds his owne, now we gather on him, out goeth his flag and pendance or streames, also his Colours, his wast-clothes and top armings, he furles and slings his maine saile, in goes his spret sayle and misen, he makes ready

dy his close fights fore and after ; well,
we shall reach him by and by . What
is all ready ? Yea, yea. Euery man to his
charge, Dowse your top sayle, salute
him for the sea ; Hale him : whence
your ship , of *Spayne*, whence is yours,
of *England*, are you Merchants or Men
of Warre, We are of the Sea. He wayes
vs to leyward for the King of *Spaine*,
and keepes his loufe. Giue him a chafe
peece, A broad side, and runne a head,
make ready to tacke about, giue him
your sterne peeces, be yare at helme,
hale him with a noyle of Trumpets.
We are shot through and through, and
betweene winde and water, trye the
pumpe. Maister let vs breathe and re-
fresh a little, sling a man ouer-boord to
stop the leake, done, done, is all ready
again, Yea, yea : beare vp close with
him, with all your great and small
shot charge him ; Boord him on his
wether quarter, lash fast your graplins
and sheare off, then runne stemlins the

mid ships. Boord and boord, or thwart
the hawse; we are foule on each other:
The ships on fire; Cut any thing to get
cleere, and smother the fire with wet
clothes, We are cleere, and the fire is
out, God be thanked. The day is spent,
let vs consult. Surgion looke to the
wounded, wind vp the slaine, with
each a waight or bullet at his head and
feete, giue three peeces for their fune-
rals. Swabber make cleane the shippe.
Purser record their names; Watch bee
vigilant to keepe your berth to wind-
ward: and that wee loose him not in
the night. Gunners sponge your Or-
dinances; Souldiers skower your pee-
ces; Carpenters about your leakes.
Boteson and the rest, repaire the sayles
and shroudes. Cooke see you obserue
your directions against the morning
watch. Boy, Holla Maister, Holla, Is
the kettle boyled, yea, yea, Boteswaine,
call vp the men to Prayer and Break-
fast.

Boy

For yong Sea-men. . 25

Boy fetch my celler of Bottles , a
health to you all fore and afte, courage
my hearts for a fresh charge : Maifter
lay him a bord loufe for loufe ; Mid-
ships men fee the tops and yeards well
maned with ftones and brasse-bals , to
enter them in the shrouds , and every
squadron elfe at their beft aduantage,
found Drums and Trumpets , and St.
George for England

They hang out a flag of trufe, ftand
in with him , hale him a mayne, a bafe
or take in his flagge , ftroke their fayles
and come aboard , with the Captaine,
Purfer, and Gunner , with your Com-
miffion, Cocker, or bills of loading :
out goes their Boate , they are lanced
from the Ship fide , Entertayne them
with a generall cry , God faue the Cap-
tayne, and all the Company , with the
Trumpets founding , examine them
in particuler , and then conclude your
conditions with feafting, freedome, or
punifhment , as you finde occafion ;

D 3 other.

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other wayes if you surprize him or enter perforce, you may stow the men, rifle, pillage, or sacke, and crye a prize.

To call a Councell in a Fleete: there is the Councell of Warre, and the common Councell, which hangs their flags out in the mayne shrouds, or the mizen.

Nor betweene two Navies they use often, especially in a Harbour or rode, where they are at anchor, to fill olde Barkes with pitch, tar, trayne oyle, linsed oyle, brimstone, rosen, reedes, and dry wood and sutets combustible things, sometimes they linke three or foure together, towed together in the night, and put a drift as they finde occasion. To passe a Fort, some will make both shippe and sayles all blacke, but if the Fort keepe but a fire on the other side, and all their peeces poynt blanke with the fire, if they discharge, what is betwixt them and the fire, the shot will
hit,

hit, if the rule be truly observed. To conclude, there is as many stratagims, advantages, and inventions to be used, as you finde occasions, and therefore experiences must be the best Tutor.

Bend your passerado to the mayne-
sayle, git the sailes to the yeards, about
your geare on all hands, hoyste your
sayles, halfe mast high, make ready to
set sayle, crosse your yeards, bring your
Cable to the capsterne. Boatswaine
fetch an Anchor aboard, break ground,
or way Anchor, heave a head, men in-
to the tops, men vpon the yeards, come
is the Anchor a pike, heave out your
topsayles, haule your sheates; What's
the Anchor away, yea, yea; Let fall
your fore sayle, whose at the helme
there, coyle your cable in small flakes,
hawle the cat, a bitter, belay, loufe, fast
your Anchor with your shanke pain-
ter, stow the boate, Let sayle your
maine saile, on with your bonnets and
drablers, steare study before the wind.

Concerning
sayling, or wor-
king of a Ship.

The

The wind veares, git your star-boord
 tacks aboard, hawle off your ley sheats,
 ouerhawle the ley bowlin, ease your
 mayne brases, out with your spret-saile,
 flat the fore sheat, pike vp the misen or
 brade it, The ship will not wayer, loure
 the maine top saile, veare a fadome of
 your sheat, a flown sheate, a faire winde
 and a boune voyage, the wind shrinks,
 get your tacks close aboard, make rea-
 dy your loufe howks and ley fagnes, to
 take off your bonnits and drablers,
 hawle close your maine bowline: It
 ouercasts, we shall haue winde, fattle
 your top sailes, take in the spret sayle, in
 with your top sayles, lower your maine
 sayles, tallow vnder the parrels, in with
 your maine sayle, lower the fore sayle,
 the sayle is split, brade vp close all your
 sayles, lash sure the Ordinances, strike
 your top masts to the cap, make sure
 your sheepes feet, a storme, hull,
 lash sure the helme a ley, lye to try our
 drift, how capes the ship, cun the ship,
 spoune

spoune before the winde, she lusts, she
lyes vnder the Sea, trie her with a crosse-
jacke, bowse it vp with the out. loo.
ker, she will founder in the Sea, runne
on shore, split or billage on a Rocke, a
wracke, put out a goose. winge, or a
hullocke of a sayle, faire weather, set
your fore sayle. Out with all your sailes,
get your Larbord tackes aboard, hawle
off your Starboord sheats, goe large,
laske, ware yawning, the ships at
stayes, at backe-stayes, ouer. set the
ship, flat about, handle your Sayles,
or trim your sayles, let rise your tacks,
hawle of your sheats. Rocke-weede, a-
drift, or flotes,) one to the top to looke
out for Land, a ships wake, the water
way, the weather bow, weather coyle,
lay the ship by the Ley, and heaue the
lead, try the dip sic line, bring the ship
to rights, fetch the log. line to try what
way shee makes, turne vp the minute
glasse, obserue the hight, Land, to make
Land, how beares it, set it by the Com-
E passe,

passe, cleare your leach-lines, beare in,
 beare off, or stand off, or sheare off,
 beare vp, outward bound, home-ward
 bound, shorten your Sailes, take in
 your Sailes, come to an Anchor vn-
 der the Ley of the weather shore, the
 Ley shore, nealed too, looke to your
 stops, your Anchor comes home, the
 ships a drift, vere out more Cable, let
 fall your sheat Anchor, land-locked
 more the ship, a good Voyage, Armes;
 arme, a skiffe, a frigot, a pinnace, a
 ship, a squadron, a fleete, when you
 ride amongst many ships, pike your
 yards.

The tearmes
 of the boate.

To the boate or skiffe belongs oares,
 a mast, a saile, a stay, a halyard, sheats,
 a boat-hook, thoughts, thoules, rudder,
 irons, bailes, a trar-pawling; or yaw-
 ning, carlings, carling-knees for the
David, the boates-wayles, a dridge, to
 row, a spell, hold-water, trim the boate
vea, vea, vea, vea, vea, who fies Amen,
 one and all, for a dram of the bottle.

A

A Basillisco, double Cannon, Cannon Pedrea, demy Cannon, Culvering, Sakar, Minion, Falcon, Falconet, Rabbenet, Murderers, slings, Chambers, Curriors, Hargabusacrook, Musquets, bastard Musquets, Coliners, Carbines, Crabuts, long Pistols, short Pistols, Charges, Cartrages, Match, Spunges, Ladles, Rammers, Rammers heads, tomkins, a worme, a bore, a barrell, taper bore, hunicomed, lintstockes, carrages, trukes, linch-pins, trunions, axell-trees, beds, coynings, the peeces in the prow, the chase peeces in the sterne, the quarter peeces, the mid-ships, the vpper tyre, the middle tyre, the lower tyre, their fids and leads to keepe dry the touch hole: Trauers a peece, dispect a peece, compasse Calipers, a gunners quadrant, a hand spike, a crow of iron, to mount a peece, to dismount a peece, a darke Lanthorne, a budge barrell, a horne, a priming iron: wyer, round-shot, crosse-

The names of
all sorte of
great Ordinance and peeces, and their appurtenances.

barre-shot, chayne-shot, langrill shot, a case, case-shot, lead, melting ladles, moulds, bullet bagges, Musquet shot, Colyuer shot, quartred shot, Pistol shot, poylone bullets, brasse bals, iron bals, granadoes, trunks of wilde fire, pikes of wild fire, arrowes of wild fire, pots of wild fire, or dragouns. To cloye a peece: To loade a peece: To poyson a peece, hookes for gunner or tacklings.

Concerning
the shooting of
great Ordnance.

Concerning the particuler theormes, or tearmes for great Ordnances, as the concaue, trunke, cylinder, the soule or bore of a peece: To know whether she beequally bored, camber, taper, or belbored, the severall names of her mettle, the thinnesse and thicknesse, her carnooze, or base ring at her britch, her shaft or chase, her trunnions, mousell-rings at her mouth, to dispart her, know her leuell poynt blanke and best at randome, her fortification, the differences of powder, be it serpentine or corned powder, if she be well moun-
red

ted, vppon a leuell plot-forme or no, besides there are so many vncertaine accidents, both in the peece, shot, and powder, the ground, the ayre and differences in proportion, they can no certaine artificiall rules be proscribed. Those proportions following are neere the matter, but for your better satisfaction, read Mr. *Digs* his *Pantrymetria*, Mr. *Smith*, or Mr. *Burnes* Arte of gunnery, or Mr. *Robert Nortons* expositions vpon maister *Digs*, any of these will shew you the Theoricke; but to be a good Gunner, you must learne it by practise. The Gunners scale is made in brasce at Tower Hill, with prospective glasses, and many other instruments by Mr. *Bates*.

A Table of Proportions for the use of great Ordinance.	The weight of the Pieces in pounds.	The weight of the shot in pounds.	The Circumference of the shot in inches.	The height of the shot in inches.	The length of the Ladle in inches.	The breadth of the Ladle in inches.	The weight of the powder in pounds.	Skores of paces at poynt blank.
<i>A Cannon.</i>	8000	63	$24\frac{5}{8}$	$7\frac{1}{2}$	23	15	46	26
<i>Demy Cannon.</i>	6000	32	$18\frac{5}{8}$	6	$22\frac{5}{8}$	$11\frac{1}{2}$	24	30
<i>A Culvering.</i>	5500	18	$15\frac{1}{2}$	5	22	9	14	33
<i>Demy Culvering.</i>	4500	9	$12\frac{4}{7}$	4	20	8	9	39
<i>ASacar.</i>	3500	$5\frac{1}{4}$	$10\frac{3}{4}$	$3\frac{1}{4}$	$16\frac{1}{8}$	$6\frac{1}{2}$	$5\frac{1}{4}$	26
<i>A Minion.</i>	1500	4	$9\frac{1}{2}$	3	15	6	4	25
<i>A Falcon.</i>	1100	$2\frac{1}{4}$	$7\frac{6}{7}$	$2\frac{1}{2}$	$12\frac{1}{2}$	5	$2\frac{1}{4}$	14
<i>A Falconet.</i>	500	$1\frac{1}{4}$	$6\frac{1}{2}$	2	10	4	$1\frac{1}{4}$	8

Note that seldome in any Ships they use any Ordinance greater then a demy Cannon.

The

For yong Sea-men. 35

The Ship hath one third part; the Victuler the other third; the other third part is for the Company, and this is subdivided thus.

How they divide their shares in a Man of Warre.

Shares.

<i>The Captaine hath</i>	9.
<i>The Master hath</i>	7.
<i>The Mates hath</i>	5.
<i>The Gunners hath</i>	5.
<i>The Carpenter hath</i>	5.
<i>The Boteswaine hath</i>	4.
<i>The Marshall hath</i>	4.
<i>The Corporall hath</i>	3.
<i>The Chyrurgion hath</i>	3.
<i>The quarter Masters hath</i>	4.
<i>The Steward hath</i>	3.
<i>The Cooke hath</i>	3.
<i>The Coxon hath</i>	3.
<i>The Trumpeter hath</i>	4.
<i>The Sailers, two or one and a halfe.</i>	
<i>The Boyes a single share.</i>	
<i>The Leinutenant what the Captaine will give him, or as they can agree.</i>	

They

They vse to appoint a certaine reward extraordinary to him that first discries a Sayle if they take her, and to him that first enters her.

For to learne to obserue the Altitude, Latitude, Longitude, Amplitude, the variation of the Compasse, the Sunnes Azimuth and Almicanter, to shift the Sunne and Moone, and to know the tydes, your roomes, pricke your card, and say your Compasse, get some of those bookes, but practise is the best.

Mr. Wrights *errors of Nauigation.*

Mr. Taps *Sea-mans Kallender.*

The Art of Nauigation.

The Sea Regiment.

The Sea-mans secrets.

Waggonour.

Mr. Gunters *workes.*

The Sea-mans glasse for the skale.

The new attracter for variation.

Mr. Wright *for the vse of the Globe.*

Mr. Hewes *for the same.*

Good

Good Sea Cards.

Two paire of Compasses.

An Astralobe quadrant.

A Crosse staffe.

A backe staffe.

An Astrolobe.

An Nocturnall.

If you haue a Divine, his pay is most commonly both from the Aduenturers and the Saylors, so also is the Chyrurgion.

Young Gentlemen that desires command ought well to consider, the condition of his ship, victuall, and Company; for if there be more learners then Saylers, how sleightly sooner many esteeme Saylers, all the worke to saue Ship, goods, and liues, must lye vpon them, especially in foule weather, the labour, hazard, wet and cold is so incredible I cannot expresse it. It is not then the number of them that here will say at home, what I cannot

Advertise-
ments for yong
Commanders,
Captains and
Officers.

doe, I can quickly learne, and what a great matter it is to sayle a Ship, or goe to Sea, surely those for a good time will doe most trouble then good, I confesse it is more necessary such should go, but not too many in one ship, for if the labour of sixty should lye vpon thirty, as many times it doth; they are so ouer-charged with labour, bruises, and ouer-strayning themselues, for there is no dallying nor excuses, with stormes, gusts, over growne seas, and ley shores; they fall sicke of one disease or other, and then if their Victuals be putrified, it indangers all. Men of all other professions in lightning, thunder, stormes and tempests, with raine, and snow, may shelter themselues in dry houses, by good fires, and good cheare; but those are the chiefe times, that Sea-men must stand to their tackellings, and attend with all diligence their greatest labour vpon the Deckes: Many supposeth any thing is good enough

nough to serue men at sea, and yet nothing sufficient for them a shore, either for their healthes, for their ease, or estates, or state. A Commaunder at sea should do well to thinke the contrary, and prouide for himselfe and company in like manner; also seriously to consider what will be his charge, to furnish himselfe at sea, with bedding, linnen, armes and apparell; how to keepe his table aboard, his expences on shore, and his petty tally, which is a competent proportion according to your number, of these particulars following.

Fine wheat flower, close and well packed, Rise, Currands, Sugar, Prunes, Cinamon, Ginger, Pepper, Cloues, Greene-ginger, Oyle, Butter, Olde Cbeese, or Holland, Wine vinegar, Canary Sacke, Aqua vita, the best Wines, the best Waters, the iuyce of Lemons for the Scuruey, white Bisket, Oate-meale, Gammons of Bacon, dried neates tongues, Rosted Beefe, packed vp in vineger.

Legges of Mutton minced and stewed and close packed vp with butter in earthen pots.

To entertaine strangers, *Marmelot*, *Suckers*, *Almonds*, *Comfits*, and such like.

Some it may bee will say, I would haue men rather to feast then fight. But I say the want of those necessities, occasions the losse of more men, then in any *English* fleet hath bin slaine in any fight since 88. for when a man is ill sicke, or at the poynt of death, I would know whether a dish of buttered Rice, with a little Cinamon and Sugar, a little minced meate, or roast beefe, a few stewed Prunes, a race of greene ginger, a flap-Iacke, a Can of fresh water brued with a little Cinamon, Ginger and Sugar, be not better then a little poore *John*, or salt fish, with oyle and mustard, or bisket, butter, cheese or oatemeale pottage on fish dayes, salt beefe, porke and pease and fixe shillings beere, this is your ordinary ships allowance, and good for them

them are well, if well conditioned, which is not alwayes, as sea-men can too well witnesse: and after a storme, when poore men are all wet, and some not so much a cloth to shift him, shaking with cold, few of those but will tell you, a little Sacke or Aquavita, is much better to keepe them in health, then a little small beere or cold water, although it be sweete, now that euery one should prouide those things for himselfe, few of them haue either that prouidence or meanes. And there is neither Alehouse, Tauerne, nor Inne to burne a fagot in, neither Grocer, Poulterie, Apothecary, nor Butchers shop: and therefore the vse of this petty tally is necessary, and thus to be employed as there is occasion, to entertaine strangers as they are in quality, euery Commander should shewe himselfe as like himselfe as he can, as well for the credit of the ship and his settors forth as himselfe, but in that heerein euery one

F 3. may

may moderate themselves according to their owne pleasures, therefore I leaue it to their owne discretions. And this brieft Discourse, and my selfe, to their friendly construction and good opinion.

IOHN SMITH *Writ this with his
owne Hand.*

FINIS.

Errata.

P Ag. 4. l. 19. for a basket reade basket. p. 5. l. 18. for gang reade a choyce gang. p. 7. l. 4. for midships men, r. midships, p. 12. l. 7. for the blot, r. blocke, p. 13. l. 5. for clow, r. clew, p. 17. l. 12. for wetch r. catch, *ibid.* l. 19. for mouthfoune, r. mounthfoune, p. 18. l. 1. for odde r. o - e, p. 26. l. 10. for nor r. Nor, *ibid.* l. 15. for succers r. such, p. 28. l. 22. make them sure with your sheepsfeet, p. 30. l. 8. r. stoppers for stops. p. 31. l. 19. for dispeet r. dispeart, p. 32. l. 20. for gunner r. gunners.

AN
ACCIDENCE
OR
The Path-way to
EXPERIENCE.

Necessary for all Young Sea-men, or those
that are desirous to goe to Sea, briefly shewing
the Phrases, Offices, and Words of Command,
Belonging to the Building, Ridging, and Sayling,
a Man of Warre; And how to manage
a Fight at Sea.

Together with the Charge and Duty of
every Officer, and their Shares:

Also the Names, VVeight, Charge, Shot, and
Powder, of all sorts of great Ordnance.
With the use of the Petty Tally.

Written by Captaine IOHN SMITH some-
times Governour of *Virginia*, and Admirall
of NEW ENGLAND.

LONDON:

Printed for Jonas Man, and Benjamin Fisher,
and are to be sold at the signe of the Talbot,
in *Aldersgate Street*. 1637.

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